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WAC 197-11-960 Environmental Checklist

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

Powder Mill Gulch - Source Area Interim Action

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2. Name of applicant:

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Boeing Commercial Airplanes (BCA)

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Address and phone number of applicant and contact person:

Nick Garson, Boeing Shared Services Group For technical project questions please contact: Jerry Ninteman, Landau Associates **Environmental Remediation** 130 - 2nd Avenue South P.O. Box 3707, MC 1W-12 Edmonds, WA 98020 Seattle, WA 98124-2207 425-778-0907 425-269-7866

4. Date checklist prepared:

April 7, 2006

5. Agency requesting checklist:

Washington State Department of Ecology (for a Model Toxics Control Act [MTCA] Interim Action [IA])

6. Proposed timing or schedule (including phasing, if applicable):

July 1, 2006 through August 2007

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

This interim cleanup action may ultimately be considered the full cleanup action, based on an assessment of the residual trichloroethylene (TCE) concentrations remaining in groundwater in the proposed action area. If not, future additional source area treatment may be required.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The following assessments, which relate to the proposed IA, have been prepared:

URS Corporation. 2002. Draft Remedial Investigation Report (Revision 2.0), BCAG Everett Plant. Everett, WA, September 17.

- Daley, Wayne. July 1993. Memo from Wayne Daley, KCM, to Dan Mathias, City of Everett, regarding salmon utilization of streams in the City of Everett based on electrofishing. Seattle, WA.
- NOAA Fisheries. June 2005. Endangered Species Act Status of West Coast Salmon and Steelhead, Updated March 14, 2005. www.nwr.noaa.gov/1salmon/salmesa/pubs/1pgr.pdf. Lacey, WA.

Reports in progress:

- Landau Associates. 2006. Draft Remedial Investigation Report Update (Section 21), BCAG Everett Plant. Everett, WA, June (pending).
- Landau Associates. 2006. Draft Permeable Reactive Barrier Conceptual Interim Action Work Plan, Powder Mill Gulch, Boeing Everett Plant, WA, April 7.
- Landau Associates. 2006. Draft Source Area Interim Action Work Plan, Boeing Everett Plant, WA, April 4.
- URS Corporation. 2006. Draft Basis of Design and Site Management Plan, Powder Mill Creek Sediment Removal Interim Action, BCA Everett Plant. Everett, WA, April.
- Documentation as needed to support conformance with the substantive requirements of state and local permits as identified in Question 10 and coverage under the U.S. Army Corps of Engineers Nationwide Permit No. 38.
- 9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
 - A SEPA Checklist and JARPA have been submitted for dredging of PCB-contaminated sediment in Powder Mill
 Creek, which is immediately north of the TCE source area (submitted by The Boeing Company in March 2006).
 - A SEPA Checklist has been submitted for installation of a permeable reactive barrier (PRB) at the leading edge
 of the TCE plume, which is approximately 900 to 1,400 ft north of the source area, depending on the alignment
 selected (submitted by Landau Associates in April 2006).
- 10. List any government approvals or permits that will be needed for your proposal, if known.

State or local government approvals are required by:

 Ecology: Approval of PMG Source Area Interim Action Work Plan (IAWP) under MTCA requirements and Resource Conservation and Recovery Act (RCRA) Agreed Order between Boeing and Ecology. The project will comply with the substantive requirements associated with the following permits as required under MTCA:

- · City of Everett: Critical areas ordinance and grading ordinance.
- Treatment system air discharge permit(s) will be through an existing Ecology Air Operations permit for BCA Everett Plant.
- · Treated water discharge permit to the City of Everett sanitary sewer, as necessary.
- 11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The proposed project is an Interim Action (IA) cleanup project designed to reduce or eliminate a source of TCE contamination to site groundwater. It is located within the asphalt-lined stormwater detention basin which forms part of the headwaters of Powder Mill Creek. Stormwater primarily flows into the stormwater sedimentation basin (adjacent to the detention basin), and then through the associated peat filters and created wetlands, and discharges into Powder Mill Creek about 500 ft downstream of the stormwater detention basin. During heavy precipitation as defined by a rainfall event that produces flows to the sedimentation basin in excess of 100 cfs, which approximately corresponds to a precipitation event with an intensity of at least 0.1 inches per hour, stormwater flows into the stormwater detention basin. Water from the detention basin discharges to the head of Powder Mill Creek when the water level in the detention basin is greater than about 8.5 feet. The portion of the creek at the detention basin outfall, therefore, has intermittent flow. The IA will be conducted under Ecology's oversight as part of the RCRA Corrective Action Agreed Order between Boeing and Ecology and to fulfill the requirements of the Washington State MTCA. The objective of the IA is to thermally treat groundwater in the TCE source area with Electrical Resistance Heating (ERH).

The project would install approximately 57 electrodes, 10 groundwater monitoring wells, and associated condensate (vapor/steam) recovery piping within the source area. Recovery piping will be connected to a vacuum blower to extract TCE-laden soil vapor above the heated zone. The condensate will be treated with a carbon filter onsite. Vapors will be treated to remove TCE and minor levels of other volatile compounds and discharged to the atmosphere. Treated water will be either used as coolant for the electrodes or discharged to the sanitary sewer.

The project area is located entirely on Boeing property (see attached figures). No habitat will be impacted during this IA. This IA will not change the uses of the site.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reusonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Powder Mill Gulch stormwater detention basin is located to the north of the BCA Everett Plant. The plant is located in the southern half of Section 3 and the northern half of Section 10 of Township 28N, Range 4E. The North Complex, located just south of Powder Mill Gulch, is north of Highway 526. The northern boundary of the Boeing property is at Seaway Boulevard.

The stormwater detention basin itself is located at Northing 344,713.38, Easting 1,286,445.039, which is also in Section 10 of Township 28N, Range 4E (see the attached figures).

- **B. ENVIRONMENTAL ELEMENTS**
- 1. Earth*
- a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other

The site comprises the headwaters of Powder Mill Creek. The site is a steep-walled creek basin, with occasional terraces.

b. What is the steepest slope on the site (approximate percent slope)?

100%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The upland areas of the Boeing Everett Plant and the upper banks of Powder Mill Creek are underlain by Vashon till. Powder Mill Creek incises into the upland and extends into the Esperance sand aquifer, a regional aquifer that underlies the Boeing Everett Plant.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

In the vicinity of the work area, higher slopes of the creek canyon show signs of landslide activity. Project activities will not affect slope or soil stability.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Please see the response to question 11 for a description of the planned work. No grading is planned for remediation activities in the source area. A small quantity of crushed rock will be added to the existing rock/asphalt pad along the western edge of the detention pond (see attached figures) to provide a pad for the remediation equipment.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The site is already paved with asphalt. No additional impervious surfaces will be constructed.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Most of the project work will be conducted inside the stormwater detention basin, which is designed to contain and settle turbid water. Runoff, if any, from work conducted outside of the paved basin near the equipment staging area will be conveyed to the detention basin. All disturbed areas will be immediately covered by crushed rock/gravel. If a disturbed area must remain open, the appropriate sediment control measures will be implemented, including silt fence, straw mulch, or rolled matting.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

During well installation activities, air emissions will be limited to releases from equipment (drill rigs, forklifts, etc). While the remediation system is in operation, vapor-phase TCE will be treated onsite and discharged to the atmosphere under an existing Ecology Air Operations permit for the BCA Everett Plant.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None known.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Extracted soil vapor will be treated using vapor-phase granular activated carbon prior to discharge.

3. Water

a. Surface:

 Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The headwaters of Powder Mill Creek are on the opposite side of the stormwater basin dam from the work area within the detention basin. The first 500 ft of Powder Mill Creek is typically dry over most of the year. The site contains a stormwater semmentation basin, along with associated peat filters and created wellands. Powder Mill Creek flows into Port Gardner Bay.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes. Installation of the wells will occur between 100 and 300 ft south of the headwaters of Powder Mill Creek on the opposite side of the stormwater detention dam. Work within the detention basin will be performed during a no- or low-flow period.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground:

 Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No groundwater will be withdrawn; however, the thermal remediation system will heat the groundwater and vacuum extract the resulting steam and volatilized TCE. Approximately 367,000 gallons of steam condensate will be generated for the life of the remediation system. The condensate will be treated onsite and most of it will be reused as coolant for the electrodes. The minor quantity of condensate not used as coolant will be treated, analyzed, and uischarged to the onsite sanitary sewer under a separate discharge permit. A small quantity of potante water (approximately 50 gallons per well) will be added during the well installation process to control heave within the drill casing. During development of the wells following installation, the added volume of water will be removed, analyzed, and disposed of offsite.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals . . .; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None.

- c. Water runoff (including stormwater):
 - 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

All work will occur within the stormwater detention basin itself and precipitation falling on construction support areas will naturally flow into the stormwater basin. The work will be conducted during the dry season. If unseasonably wet weather is encountered enough to fill the basin, work will halt until the basin can be emptied.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Soil cuttings related to drilling activities will contain low levels of TCE. Cuttings will be immediately containerized as each hole is drilled and analyzed prior to treatment and disposal offsite. Water used for decontamination purposes will be drummed and analyzed prior to treatment and disposal offsite.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

The following measures will be used to control impacts to surface water and potential runoff:

- All sediments that have accumulated within the asphalt-lined stormwater detention basin will be scraped out prior to the start of work.
- All equipment will be sprayed off prior to exiting the detention basin.

4. Plants

| a. | Check or circle types of vegetation found on the site: |
|----|--|
| | Deciduous trees: alder, broad-leaf maple |
| | Evergreen trees: Douglas fir |
| | Shrubs: sword fern, salal |
| | Grass: fescue |
| | Pasture: |
| | ——Crop or grain: |
| | Wet soil plants: |
| | Water plants: |
| | ——Other types of vegetation: |
| | The site is fully paved with asphalt. |

b. What kind and amount of vegetation will be removed or altered?

The vast majority of the work will occur within the paved portion of the site. A small treatment system staging area will be cleared of grass and potentially a few alder trees to facilitate the placement of a crushed rock pad. The total staging area is approximately 50 ft wide by 100 ft long (5,000 sq ft), as shown on the attached figure. Approximately half of this area is unpaved and will require crushed rock placement.

c. List threatened or endangered species known to be on or near the site.

There are two eagle nests located near the mouth of Japanese Creek (about a mile from the project site) and one eagle nest located near the mouth of Merrill and Ring creeks (about 1.5 miles from the project site). All of the nests are located within a residential area a short distance from Mukilteo Boulevard and the birds are acclimated to human presence. In addition, the nests are out of the line of sight of the project and far enough away that construction-related noise will not impact them. Eagles are the only listed threatened and endangered species in proximity to the site. The majority of their foraging would occur on the Sound, but there is a slight chance of foraging on waterfowl at the constructed wetland located approximately 600 ft south of the site (March 2006 - URS SEPA Checklist).

Visual surveys of the reach of Powder Mill Creek north of where the IA would be constructed, and visual and electro-fishing surveys conducted upstream and downstream of this reach showed no fish present in the surveyed portions of the creek (URS 2006 Draft Basis of Design and Site Management Plan, Powder Mill Creek Sediment Removal Interim Action, April 7.). However, there have been reports that fish are present in the creek near the constructed pond approximately 500 it north of Seaway Boulevard. Existing culverts probably prevent fish passage from Port Gardner Bay. The U.S. Army Corps of Engineers determined that the planned dredging of the creek north of the TCE source area "will not affect any species listed as threatened or endangered under the ESA (or a species proposed for such designation) or destroy or adversely modify the critical habitat of such a species." (March 2006 - URS SEPA Checklist).

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

No landscaping or other vegetation enhancements are planned at this time.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

Birds: hawk, heron, eagle, songbirds, other: Red-tailed hawk nest located 400 ft east of site Mammals: deer, bear, elk, beaver, other: coyote, gophers, mice

Fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.

No threatened or endangered species are known to be present based upon a site reconnaissance, Washington Department of Fish and Wildlife priority species maps, and a U.S. Army Corps of Engineers review (March 2006 - URS Corp SEPA Checklist).

c. Is the site part of a migration route? If so, explain.

No.

d. Proposed measures to preserve or enhance wildlife, if any:

The project itself will improve habitat for wildlife by removing a continuing source of low-level TCE contamination that discharges to Power Mill Creek.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Three-phase electricity will be used to power the resistivity electrodes and vapor recovery equipment.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

ERH operation may be cycled to limit operation during peak energy use periods.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

During installation of the wells, TCE-contaminated groundwater and soil will be encountered. Appropriate health and safety precautions will be used.

1) Describe special emergency services that might be required.

No special services are required.

2) Proposed measures to reduce or control environmental health hazards, if any:

A Health and Safety Plan will be prepared and workers will use standard best management practices to avoid contact with these contaminants.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise will be limited to daylight hours during the period of construction. Expected equipment will be drill rigs, forklifts, and personal vehicles. Blowers will be used for the vapor extraction system 24 hours a day, 7 days a week.

3) Proposed measures to reduce or control noise impacts, if any:

Construction will be limited to daylight hours, and noise will be mitigated by the steep and highly vegetated canyon walls.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties?

The site is currently part of the BCA's stormwater detention facilities. Adjacent properties are the BCA Everett Plant North Complex (to the south and west), unoccupied Boeing properties (to the east and northwest), and unoccupied property owned by the City of Everett (to the north). The nearest residential and commercial land uses are approximately 2,000 ft to the east.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

Site structures will include stormwater sedimentation and detention basins, both asphalt-lined, with associated spillways and a small, sanitary sewer line access building. Two peat filters and associated created wetlands are located north of the work area.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

M-1, Office and Industrial Park

f. What is the current comprehensive plan designation of the site?

5.1 Heavy Industrial

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable. The area is not a shoreline of the state.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

None.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

N/A

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The project has been reviewed by the City of Everett.

- 9. Housing
- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

N/A

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The electric resistivity control structure and vapor recovery unit will not exceed 10 ft in height.

b. What views in the immediate vicinity would be altered or obstructed?

None.

c. Proposed measures to reduce or control aesthetic impacts, if any:

N/A

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

b. Could light or glare from the finished project be a safety bazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

N/A

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

None. The site is private property and access is controlled by fences, gates, and security personnel.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

N/A

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No.

| 14. Transportation |
|--|
| a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any. |
| The site is served by private access roads owned by BCA. |
| b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop? |
| No. N/A |
| c. How many parking spaces would the completed project have? How many would the project eliminate? |
| None. |
| d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private). |
| No. Existing access roads will not need to be improved to carry out the project. |
| e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. |
| No. Construction equipment will be moved to the site through the North Complex using Boeing private roads. |
| f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur. |
| None. |
| g. Proposed measures to reduce or control transportation impacts, if any: |
| N/A |
| 15. Public Services |
| a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe. |
| No. |
| b. Proposed measures to reduce or control direct impacts on public services, if any. |
| N/A |
| |
| |
| |

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to

be on or next to the site.

c. Proposed measures to reduce or control impacts, if any:

None.

N/A

16. Utilities

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Existing water utilities will be used to wash the tires/tracks of the equipment that enters the detention basin. Existing low voltage power supply will be inadequate for the needs of the thermal electrodes to be installed. High voltage power will be extended to the site.

C. SIGNATURE

| The above answers are true and | complete to the | ne best of my | knowledge. | I understand | that the | lead |
|---------------------------------|-----------------|---------------|------------|--------------|----------|------|
| agency is relying on them to ma | ke its decision | ı . | | | | |

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| Signature: | Stroll | |
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